



# **EARTH SCIENCE MISSION OPERATIONS**



## **EDOS Developments and Future Plans 2006-2007**

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# EDOS Developments 2006



- **Connectivity from Ground Stations:**  
**March 2006:**
  - All EDOS GSIFs at the ground stations are now connected to the LZPF (GSFC) via a high-rate IP network line.
  - EDOS operations software was made fully compliant with the high-rate IP data transfers.
- **Short-term Data Storage:**
  - Raw data captures are now stored on hard drives using Storage Area Network (SAN) technology at each ground station.
  - Discontinued the usage of AMPEX tapes for the required temporary storage of raw data captures on non-volatile media.
  - Elimination of tapes allows automation of data reprocessing.



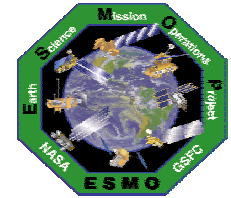
# EDOS Developments: EDOS Data-Driven Phase I June, 2006



- The EDOS Data-Driven enhancement was placed into Operations in June 2006.
- Data-Driven features:
  - The EDOS hardware performing the data capture at each ground station was reconfigured via hardware and software to operate without the need of a pre-pass schedule
    - » **Now driven by presence of data, not by a schedule.**
  - Each capture system is dedicated to each antenna and it is actively monitoring incoming signals until it finds a signal that matches any of the defined supported spacecrafts.
  - Advantages:
    - » **continuous capture even on last minute antenna schedule changes,**
    - » **avoidance of any pre-pass configuration issues,**
    - » **lower operations costs,**
    - » **automated capture reconciliation.**

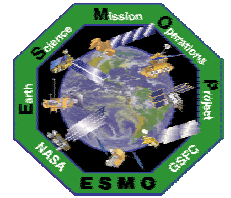


# EDOS Data-Driven Poster





# EDOS Data-Drive Part II



- **Spring 2007**
  - Final phase of EDOS re-engineering
  - Consolidation of operating systems into a single one
  - Consolidation of hardware to fewer upgraded platforms
  - Integration of all EDOS monitoring and control functions into a single set of screens accessible through a web browser.
  - Additional capability of producing rate-buffered data files at the ground stations.
  - Advantages:
    - » simpler operations of the EDOS system,
    - » fewer pieces of hardware to maintain and smaller floor space requirements,
    - » with a single operating system: better knowledge of a single system, quicker response to security issues
    - » reduced operating costs.